

BOARD OF REGISTERED NURSING

NCLEX-RN TASK FORCE REPORT



THE PROBLEM AND THE PLAN

December 2000

CALIFORNIA BOARD OF REGISTERED NURSING

EXECUTIVE SUMMARY

NCLEX-RN TASK FORCE REPORT

THE PROBLEM AND THE PLAN

In February 1999, the California Board of Registered Nursing established the NCLEX-RN Task Force because of concern about the increasing number of prelicensure nursing programs with a pass rate of 70% or less for first-time test takers. This eight member Task Force included four representatives from Associate Degree Nursing (ADN) programs and four from Baccalaureate Degree Nursing (BSN) programs. The goals of the Task Force were to: identify factors that increased and decreased the NCLEX-RN pass rates for first-time test takers; describe factors that appear to improve the potential for graduates of nursing programs to pass the NCLEX-RN examination on the first attempt; provide recommendations to the Board of Registered Nursing and California prelicensure nursing programs for potential use to improve the NCLEX-RN pass rate; and identify research questions for the NCSBN Research Committee to consider.

The Task Force conducted surveys, literature searches, and student interviews. Most of the published studies focused on the impact of grades in selected courses and the results from assessment tests to predict success on the NCLEX-RN. The California nursing program survey, student interviews, and one published study identified significant student characteristics affecting their ability to pass the NCLEX-RN on the first attempt. The most consistently identified characteristics were students for whom English is a second language, who work 20 hours a week or more, and who have family responsibilities at home. Academic policies that permit students to withdraw from prerequisite science courses when they are failing so they can retake them multiple times was a significant academic policy identified by nursing program directors.

Additional factors identified were delay by graduates of five months or more between graduation and taking the NCLEX-RN and limited knowledge by nursing faculty about the current NCLEX-RN test plan. Significant factors affecting Community College nursing programs were the changes in 1990 and 1993 in the Title 5 regulations that eliminated prerequisite and co requisite requirements for admission to Community Colleges. The inability to have supplemental selection criteria for admission to the nursing major adversely affected many ADN programs. Subsequent activities by the Chancellor's office acknowledging the unique needs of nursing students may correct this.

This multi-dimensional problem requires bold action if the maximum numbers of students are to graduate from the 94 pre-licensure nursing programs and successfully pass the NCLEX-RN and become licensed as registered nurses – a state with a continued shortage of RNs. Recommendations were made to the many groups involved in preparing registered nursing students, testing them, and licensing them. These recommendations are categorized by the group addressed.

Nursing Students and NCLEX-RN Candidates

- Take the licensing examination within three months after graduation
- Participate in assessment tests used during the nursing program to identify areas that need review and improvement

- Use NCLEX-RN review materials and take at least one preparedness examination.
- Become familiar with tests given on computers
- Plan for study time prior to taking the licensing examination
- Use opportunities for study groups and tutoring
- Strengthen English language proficiency if English is a second language

Nursing Faculty – Theory and Clinical

- Become familiar with the current NCLEX-RN Test Plan and use it to develop course objectives and test questions
- Use recognized assessment tests that are specific to your content area to evaluate student preparedness, course content, and course delivery.
- Use test questions that apply content to patient care situations and emphasize critical thinking and priority setting.
- Review feedback critically from the NCLEX-RN examinations to evaluate course content and delivery

Nursing Program Administration and College/University Administration

- Include discussions about the NCLEX-RN test plan with all faculty as part of faculty development, including information about the validity and job-relatedness of the Test Plan to encourage its use as a reference
- Sponsor item-writing workshops as part of faculty development
- Incorporate an assessment of language proficiency, reading level, and reading comprehension as part of prenursing assessment for potential nursing students or for counseling newly admitted students to the nursing major
- Develop techniques to identify at-risk students early and implement remediation plans
- Require that prerequisite courses for admission to the nursing major be completed within five years prior to admission to the nursing major
- Limit the number of times pre nursing students can retake required prerequisite courses
- Use standardized tests throughout the program that are part of the course grade
- Purchase NCLEX-RN type programs for the college computer lab so students can take these exams as practice throughout the program
- Conduct NCLEX-RN review courses on campus and share these with geographically close campuses whenever possible
- Consider adding a comprehensive content/synthesis course during the last semester/quarter to review content, apply critical thinking skills, provide appropriate test taking opportunities, and integrate assessment tests

Board of Registered Nursing

- Seek mandated funds from the Legislature or a grant to support a research project to develop techniques for identifying high-risk-for-failure nursing students so effective remediation strategies can be offered by the college or university
- Develop an on going database of variables relative to candidate performance on the NCLEX-RN such as type of educational program, GPA, and selected demographic characteristics
- Continue to monitor nursing programs having a low NCLEX-RN pass rates and provide feedback and consultation as appropriate
- Research the reading comprehension level of California prelicensure students and its impact on passing the NCLEX-RN on the first attempt.

CALIFORNIA BOARD OF REGISTERED NURSING

NCLEX- RN TASK FORCE REPORT

THE PROBLEM AND THE PLAN

Over the past four years, the Board of Registered Nursing, pre-licensure program directors, and faculty have been concerned about a consistent decline in the California pass rate on the National Council Licensing Examination for Registered Nurses (NCLEX-RN) for first-time test takers. This required Computer Adaptive Test licensing examination is developed by the National Council of State Boards of Nursing (NCSBN). Each state licensing Board receives quarterly reports from the NCSBN. In California, the results for the 94 pre-licensure programs are closely monitored by the nursing education consultant (NEC) assigned to each program. When the pass rate for first-time test takers is less than 70% for two consecutive quarters, the NEC contacts the nursing program director. The purpose of this contact is to determine the awareness, activities, and plans of the nursing faculty to address the issue of significant numbers of their students failing the national licensing examination. Should the low pass rate continue for four consecutive quarters, the Education/Licensing Committee and the Board are informed through a written report prepared by the program. Programs with pass rates from 71% to 75% are monitored closely by NECs to be sure pass rates don't fall below 70%. A brief description of the development of the NCLEX-RN is found in Appendix A.

During the two-year period of October 1, 1996 to September 30, 1998, the California pass rate for first-time test takers declined from 87.7% to 83.96% - a drop of 3.74%. Nationally, the pass rate for first-time test takers was the same (87.7%) and then it decreased to 85.30%; a drop of 2.40% during this same period. The Education/Licensing Committee (ELC) was notified at their January 1999 meeting that for the period of October 1, 1997 – September 30, 1998, 11 of the 94 pre-licensure programs had a pass rate of 70 % or less and seven had a pass rate of 71-75 %. Some of these programs experienced a significant decrease from their 1997 pass rates. It should be noted that even though the revised NCLEX-RN Test Plan was implemented on April 1, 1998, these percents included only one quarter under the new test plan. Since almost 20% of all prelicensure programs were below a 75% pass rate, the ELC recommended to the Board that a Task Force be established to explore this issue. Official Board action occurred at the February 1999 meeting and a Task Force was established to advise the Board on factors that seemed to contribute to this lower pass rate and potential strategies that might correct this problem.

Names for Task Force members were solicited from the Chairpersons of the California Organization of Associate Degree Nursing Directors (both northern and southern California groups) and the President of the California Association of Colleges of Nursing. An eight member Task Force was appointed - four members were selected from the Associate Degree programs (two each from northern and southern California) and four from the Baccalaureate Degree programs (northern and southern California including a representative from a Private University). Consideration was given to those programs that had low pass rates as well as those who had pass rates consistently above 75%. The names of the eight members are found in Appendix B. They have worked diligently to identify the parameters in this complex issue, research the literature and conduct their own surveys.

Activities of California NCLEX-RN Task Force

The California Board of Registered Nursing charged the Task Force to study the issue of declining NCLEX-RN pass rates for California educated first-time test takers. Task Force goals were to:

Identify factors that increase and decrease the NCLEX-RN pass rates for first-time test takers

Describe factors that appear to improve the potential for graduates of nursing programs to pass the NCLEX-RN examination on the first attempt

Provide recommendations to the Board of Registered Nursing and California prelicensure nursing programs for potential use to improve the NCLEX-RN pass rate

Identify research questions for the NCSBN Research Committee to consider *

*The NCSBN Research Committee has since been disbanded

The Task Force met three times. Many topics were discussed and surveys of NCSBN member boards and California nursing programs were conducted. Task Force members

- ❖ Reviewed information from NCSBN regarding the changes in the NCLEX-RN Test Plan effective April 1, 1998. This document recognized that there would probably be a slight decrease in the pass rate for first-time test takers with the revised Test Plan and the increased passing standard.
- ❖ Reviewed data about California nursing programs that documented the increase in the number of nursing programs with pass rates for first-time test takers below 70% and between 71-75%.
- ❖ Discussed changes in prerequisite and corequisite requirements for admission to the California Community Colleges (Title 5 Regulations). Community College Task Force members described the impact of the Title 5 changes on the prerequisite regulations in 1990 and 1993. These changes effectively eliminated the previous supplemental selection criteria used by registered nursing programs. These selection criteria had included evaluating such factors as: total grade point average (GPA); grades earned for anatomy, physiology and microbiology courses (these were usually higher than those required by the college); and prior work experience.

These changes reflected the Community Colleges' mission to provide access to all students who want additional education. As a result, students who are now admitted to associate degree-nursing programs no longer have to meet the previous selection requirements. The lottery system or "first come- first served" became the criteria. Increased attrition and decreased NCLEX-RN pass rate for first-time test takers may be partially related to these changes in selection criteria. One ADN program reported a student attrition rate of 40% after their first year – a sharp increase over previous years.

The Chancellor's Office has recognized the increased attrition rate and other concerns expressed by ADN program directors. In August 1997, his office issued a document called the *Discussion of Title 5 Concerning Prerequisites, Corequisites, Advisories on Recommended Preparation and other Limitations on Enrollment*. This document provided an opportunity for an individual Community College nursing program to investigate the impact of eliminating these previous selection/admission criteria. Based on research findings, a program could submit modified selection requirements to the Chancellor's Office for possible implementation. When a minimum of six programs in different college systems complete their research, the Chancellor's Office may give registered nursing programs a statewide waiver from the current open admission requirements. To date, four college systems have completed the necessary research. Nursing programs report that their desired outcome is that supplemental criteria for admission to the registered nursing major will result in selecting students who are better prepared to successfully complete the nursing program and pass the NCLEX-RN on first attempt.

In a recent development, the Community College Chancellor's Office has developed a *Fund for Student Success Grant – Nursing Prerequisite Study*. The Health Initiative Office at Sacramento City College is the recipient of this grant. The grant requires that a consortium of 10 community college ADN programs identify a "model-set" of prerequisites for admission to ADN programs. This consortium will establish measurable indicators of skills and experiences students need to succeed, develop an alternative to the current methods of admitting students to community college nursing programs (first-come/first-served or lottery), and implement the recommended prerequisites in at least one nursing program.

- ❖ Reviewed a 1999 survey conducted by BRN of other NCSBN Member Boards to determine if other states were studying this issue. Many other states have also had programs that experienced decreases in NCLEX-RN pass rates. Eighteen of the 50 member boards responded to the inquiry. None of the state boards had official activity underway although many states had nursing programs that were studying this issue. All state boards expressed interest in being informed of California's findings and recommendations.

Four Member Boards identified their required passing rates for first-time test takers. Kentucky and Ohio require that their nursing programs maintain a passing rate of 85%. Massachusetts and New Mexico require a pass rate of at least 80%. Massachusetts has used the 80% pass rate requirement for over 10 years. Programs falling below 80% conduct a self-evaluation and submit an Action Plan to their Board of Nursing. Massachusetts also correlates student success in science and nursing courses with NCLEX success. In New Mexico, a report is made to the Board if the NCLEX-RN pass rate is below 80% for 18 months or more. A program can be placed on "Conditional Approval" if the pass rate is below 80% for three years.

At the 2000 Delegate Assembly of the National Council of State Boards of Nursing, discussion with NCSBN staff and Iowa Board staff identified that Iowa is conducting a pilot study in which 85% of the national NCLEX-RN pass rate is being used as the accepted criteria. This approach was developed after extensive discussion by nursing educators and approval from the Iowa Board. Their education programs self report passing rates annually to the Iowa Board of Nursing. This pilot started in January 2000

- ❖ Reviewed the NCSBN study completed in 1997 to determine if the length of time between graduation date and examination date was greater for first-time California educated candidates than for other US candidates. Both groups graduated between January 1, 1996 – December 31, 1997 and took the NCLEX-RN examination during the period of October 1, 1996 – September 30, 1997. Findings were that California candidates waited, on average, one and one-half months longer to take the licensing examination than other US candidates. In addition, this small study identified that the passing rate of candidates, both California and other US, decreased as the time between graduation and examination dates increased. The pass rate of candidates testing between three and five months after graduation was significantly higher than those who waited longer than five months. No *direct* causality between increase in time and decrease in pass rate could be determined from this study. (NCSBN, 1997)
- ❖ Studied a California Board of Registered Nursing analysis of California first-time test takers for the period of July 1, 1995 – June 30, 2000. This reinforced the NCSBN study as it identified a consistent decrease occurring in the 4th quarter (October - December) of each year analyzed. Conventional thinking is that this group of applicants graduated in May-June and waited for five or more months to sit for the examination or graduated in December and delayed taking the examination for ten or more months. It should be noted that fewer graduates take the NCLEX-RN during this quarter, so the effect of failures has a larger impact on the pass rate. Please see Appendix C.
- ❖ Discussed various standardized tests and assessment tools. Assessment tests are used at various times during the nursing major. Some are used **prior to entry** to counsel students as to their readiness to enter the academically rigorous nursing major. These include: NLN (National League for Nursing) Preadmission Test, NET (Nurse Entrance Test from Educational Resources, Inc.), WPE (Written Proficiency Examination), ACT (American College Test), SAT (Standardized Assessment Test), and CAT (California Achievement Test).

Other assessment tools are used **throughout** the nursing program to measure mastery of essential content across the program. Several programs use profiles developed by private vendors based on *computerized assessment tests* paid for by students. Results are reported to individual students and aggregated for each participating nursing program. The tests are used at various points throughout the program to provide feedback to students and faculty on areas of strength and weakness. Some of the vendors are: ATI (Assessment Technologies Inc.), ERI (Educational Resources, Inc.), and Kaplan STARS (Student Test Assessment Resource Service) Program. Some of the programs have just started using these testing services and so the impact on the NCLEX-RN pass rate of first-time test takers is not yet known. Other programs use standardized *paper/pencil tests* such as NLN (National League for Nursing), Mosby, and MEDS Publishing. All of these tests compare California students with students from similar programs nationwide.

On some campuses, the issues of costs to students plus opposition from faculty and college/university administration are deterrents to using these standardized tests. Many programs prefer to use *instructor-developed tests* to assess student mastery of content areas across the program. These course tests may include questions from a test pool developed by

the publisher of the text book(s) the instructor uses. It is important to note that standardized assessment tests are used as adjuncts to the individual course tests developed by instructors.

One assessment test is used **after graduation**. The NCSBN Program Profile identifies graduates' performance on the NCLEX-RN. This Profile can assist faculty in identifying areas where their graduates demonstrated strengths and weaknesses on the licensing examination. Some California programs use it. The annual cost is a deterrent to programs with limited budgets. In addition nursing faculty report that the analysis is not as precise as they need.

- ❖ Developed a survey for all California prelicensure programs. This was a critical activity of the Task Force as they sought the opinion of Directors and faculty of the 94 prelicensure programs as to factors affecting the pass rate of first-time test takers. Please see Attachment D for a copy of the survey tool.

After a review of preliminary data, Task Force members requested that the surveys be reanalyzed to identify questions where there was 75% or greater agreement and questions where there was 30% or less agreement. The category of “no opinion or not applicable” was deleted from the second analysis of this data. In mid December 1999, an analysis of responses from 85 nursing programs (90 % response from the total of 94 prelicensure programs) was conducted by Robyn Nelson, DNSc, RN, Chairperson of the Division of Nursing, Sacramento State University. She agreed to rerun the data based on these new parameters and additional program responses. The analysis of these findings will be described in a subsequent section.

- ❖ Conducted a literature review and identified several studies during the past eight years of particular pertinence. These included:
 - A University of Massachusetts, College of Nursing study conducted in 1992 by Wolahan found that reading competency at the 12th grade level and math skills were indicators of NCLEX-RN success. The College of Nursing established successful tutorial programs and required 12th grade reading competency for acceptance into their BSN program. (Arathuzik, Abner 1998).
 - A study conducted by Wall, Miller, and Winderquist in 1993 identified that scores obtained on the NLN achievement tests, GPA of nursing courses, the paper/pencil Mosby test, and the paper/pencil NLN Diagnostic Readiness test appeared to be strong predictors of success on the NCLEX-RN. (Wall, Miller, Winderquist 1998)
 - A University of South Alabama School of Nursing study conducted by Waterhouse, Carol, and Beeman in 1993 focused on three time periods – end of the junior year, between semesters of the senior year, and at graduation. Their findings were that grades in physiology, pathophysiology, the second junior nursing course, the first senior nursing course, the sophomore grade point index (GPI) and the GPI at the time of graduation were all indicators of success on the NCLEX-RN. (Barkley, Rhodes, Dufour, 1998)

- A multi-state study reported in 1999 conducted by Lauchner, Newman, and Britt examined the accuracy of computerized comprehensive exams on predicting success on the NCLEX-RN. Benefits of the computerized tests include immediate feedback to students and an opportunity for developing remediation plans more quickly. The computerized test used in their study was the HESI (Health Education Systems, Inc.) Exit Exam (E 2). The study included 54 RN schools from 23 states with a sample size of 2,613 students. It was conducted during the academic year of 1996-97. Their study demonstrated 99.49% accuracy for predicting success on the NCLEX-RN. (Lauchner, Newman, Britt, 1999).
- ❖ In California, nursing programs at Sacramento City College, San Diego City College, College of the Sequoias, California State University, Los Angeles, and San Jose State University provided unpublished studies to the Task Force. Other nursing programs have conducted studies that were not reported to the Task Force.
- A two-year research study in the Sacramento City College ADN program identified that the GPA in required science courses, overall GPA, and reading course placement were positive indicators for success in the nursing major. In Fall 1999, these findings were implemented. Applicants are now required to have an overall GPA of 3.0 for required prerequisite sciences (anatomy, physiology, and microbiology); a GPA of 2.5 for other required prerequisites; and to pass a basic English course. Results of these changes should become evident starting in 2001.
 - San Diego City College ADN program conducted separate focus group interviews with graduates who were successful and not successful on the NCLEX-RN. Findings indicated that many graduates did not prepare for the examination; exhibited a great deal of anxiety during the test; experienced some type of nodal event prior to taking the examination; panicked when the computer went past the 75th question (the misperceived magic passing number); displayed a lack of self-confidence in their nursing knowledge; and were limited in their computer skills. Based on these findings, a variety of strategies have been implemented to assist students. They include: integrating computer-based assignments within selected courses; increasing the use of critical thinking activities; changing the format of course examinations to mimic the screen of the NCLEX-RN computer adaptive test; contracting with Educational Resources, Inc. to administer a number of content specific examinations throughout the program; and dispelling the “myth of NCLEX” that a graduate will not pass if the computer goes beyond question # 75. These changes were implemented in Spring 1999. Improved performance of students in course examinations and an increase in the NCLEX-RN pass rate to 90% have already occurred.
 - Informal student interviews conducted at College of the Sequoias ADN program reinforced many of the comments from the BRN’s survey of Program Directors and the findings at San Diego City College. Those who passed the NCLEX-RN the first-time reported they worked in study groups throughout the nursing program and as they prepared for the NCLEX-RN; used NCLEX review books and CD-ROMS; paid for review courses; took the exam within three months of graduation; had little “test anxiety”; and studied to know the material – not just to pass the licensing examination. Those who failed on the first attempt delayed taking the test, studied alone, didn’t use

- review materials, had high-test anxiety, and had significant health or family problems during or after completing the nursing program.
- California State University, Los Angeles BSN is an “impacted” program, i.e. it has more applicants than available slots. In Fall 1995, faculty recognized the need for specific supplemental criteria when almost one third of their new students had English as a second language. Faculty wanted to assist these students to successfully complete the program and pass the NCLEX-RN as well as maintain their consistent mid 90% pass rate. An analysis of this particular group of students identified deficits in pronouncing English words, vocabulary, using correct grammar, fluency, and comprehension. A course in phonics and intonation patterns was quickly developed for these students for whom English is a second language (ESL). In Fall 1996, the nursing program required the Test of Spoken English (TSE) for students who graduated from a high school where English was not the primary language. Some of the students who had received “A” grades in community college English courses demonstrated significant language deficits when they took the TSE. The NCLEX-RN pass rate dipped to 85% in 1997 – the time of completion by the cohort of ESL students admitted in Fall 1995.

Additional changes were introduced 1997 when standardized assessment tests became a requirement of the senior “capstone” course. This course consists of a faculty taught seminar that includes a comprehensive review of content from previous courses and passing a standardized assessment test. The clinical portion of the course is a work-study program of two shifts per week on an acute medical-surgical unit. These changes, implemented in 1996 and 1997, resulted in the pass rate for first –time test takers returning to 92 % or higher.

- San Jose State University BSN program is making changes based on recommendations from their School of Nursing NCLEX Task Force. These include: smaller process classes, reviewing use of current standardized tests for effectiveness, reviewing all instructor-made examinations, providing a test development workshop for all faculty, and adding a required senior “capstone” course taught by faculty that includes passing a standardized assessment test. This will be fully implemented starting in Fall 2001.

Survey Results From California Prelicensure Programs

In September 1999, the BRN conducted a survey of Directors of the 94 California pre-licensure registered nursing programs. The purpose of this 35-question survey was to determine the intensity of Nursing Program Directors agreement or disagreement with the factors identified by the Task Force members as affecting the NCLEX-RN pass rate. Eighty-five programs returned the survey (90% response rate). Fifty-nine (59) of the 71 Associate Degree Nursing (ADN) programs and 20 of the 21 Baccalaureate Nursing (BSN) programs were identified respondents. Six (6) programs did not identify themselves as either an ADN or BSN program. The survey tool is found in Appendix D.

The first 27 questions used a 5-item Likert scale ranging from “Strongly Agree” through “Strongly Disagree” to “No Opinion”. Responses were made on a scannable answer sheet. Program directors responded to the question *“The following factors impact success of the graduates of our program*

as they take the NCLEX-RN examination for the first-time.” The remaining eight questions had a variety of responses possible.

Task Force member Sharon Hall, EdD, RN, clustered the first 27 questions into five general categories. These categories and the related questions are:

- A. Student/applicant characteristics
Number of hours worked (> 20 hrs. or more per week); family responsibilities; family cultural norms/expectations; English not spoken at home.
- B. Academic background factors and history
Adequacy of high school courses as preparation; repetition of/withdrawal from prerequisite science courses; college grade inflation; LVN 30-unit option success.
- C. Program prerequisites
Demonstration of English proficiency when from a non-English speaking high school; nursing GPA requirement; basic nursing skills class before entry into nursing; CNA (certified nursing assistant) before entry to nursing; veteran’s preference for admission.
- D. Program characteristics
Use of standardized testing during program; preceptorship experience in last semester; frequent faculty turnover; regular analysis of NCLEX results; faculty knowledge of NCLEX test plan; faculty revision of curriculum based on changing test plan; faculty serve as NCLEX item writers.
- E. NCLEX preparation/process
High quality review courses; high cost of review courses; three (3) months or more between program completion and taking NCLEX; prior test taking experience on computers; students’ lack of knowledge about number of questions required to complete the NCLEX-RN; BSN students’ casual attitude when taking test as a non-graduate; ADN/BSN students’ casual attitude when taking test as a graduate. *The “casual attitude” occurs when some students report that they take the NCLEX-RN as a tryout before deciding if they needed to take a review course in preparation for REALLY taking the NCLEX-RN.*

Analysis of Survey Results

The responses are reported by category and separately by program type - 59 ADN Program Respondents, 20 BSN Program Respondents and the 85 All Program Respondents (which included the 6 Other group). They are reported in descending order of percent for the ALL respondents. Ten of the 27 weighted questions had a response from ALL 85 programs of 30% or higher at the “Strongly Agree” response level. All five categories of questions are included in this group.

Table 1

Strongly Agree Responses by Category and Percent Reported by Program Type and All Respondents

ITEM No.	QUESTION	CATEGORY	ADN respondents (59) by percent	BSN respondents (20) by percent	All Respondents (85) by percent *
4	Language spoken at home is not English	A	64	58	61
16	Interval of time (3 months or more) between student completing program and taking NCLEX exam	E	61	28	53
1	Number of hours worked as a student (20 hrs/ week or more)	A	53	37	48
6	Multiple repetitions/withdrawals from prerequisite science courses	B	46	47	48
9	GPA required for admission to nursing	C	50	26	44
5	Adequacy of high school courses in basic math, science, English	B	47	33	41
13	Preceptored clinical experiences in the last semester/quarter	D	40	25	37
8	Students required to demonstrate English proficiency if they graduated from a high school where English is not primary spoken language	C	33	39	35
2	Family responsibilities at home	A	39	21	34
22	Faculty knowledge about current NCLEX test plan	D	38	11	31

- 6 respondents who did not state Program type are included only in the All Respondents category

None of the items met the criteria Task Force members had identified for in-depth study, i.e. 75% or more strong agreement or 30% or less strong disagreement. The single item – language spoken at home is not English – had the strongest agreement for all respondent (61%) as well as a very low level of strong disagreement (1.2%). A brief analysis on each of the 10 items with greatest agreement follows:

1. Language spoken at home is not English. The problem of English language fluency is identified as a significant problem by nursing program directors. It is one that is seen across the state and transcends program type and location. When both levels of agreement (strongly agree and agree) are combined the results (ADN 92%; BSN 95%; and ALL respondents 93%). are even more striking.
2. Interval of time (3 months or more) between student completion and taking NCLEX-RN. The disparity represented by the ADN and BSN programs is difficult to explain and requires further inquiry.
3. Number of hours worked (20 hours/week or more. The profile of students enrolled in colleges across the state has undergone drastic changes in recent years. Increasingly, students

4. have multiple responsibilities that include employment outside the home and family responsibilities in the home. The disparity between ADN respondents (53%) and BSN (37%) may reflect the different populations enrolled in these two types of nursing programs. Younger students without family responsibilities frequently enroll in BSN programs. Older and mid-career students, who often have more non-school responsibilities, often enroll in ADN programs. These issues will continue to be a problem for future nursing students unless sufficient loans and scholarships are made available.
5. Multiple repetitions/withdrawals allowed for prerequisite science courses. Both types of programs identify this as an area of solid agreement. When both strongly agree and agree categories are included, the response is ADN 91%, BSN 73%, and ALL programs 88%.
6. GPA required for admission to nursing. While there is a notable discrepancy between responses from program types (ADN 50% and BSN 26%), the overall importance of GPA is acknowledged by ALL respondents. It may be that if an additional question about GPA for science courses had been asked that a stronger trend would have been reported.
7. Adequacy of high school preparation in basic math, sciences, and English. Again there is discrepancy between responses by program type. This may reflect regional high school differences or the wording of the question.
8. Preceptored clinical experience in the last semester/quarter. This item received a 37% response from ALL respondents while ADN respondents and BSN respondents differed by 15%. The discrepancy seems to stem from the relatively large “disagree” responses from both program types.
9. Students required to demonstrate English proficiency if they graduated from a high school where English is not the primary spoken language. This reinforces the earlier item that language fluency and proficiency are important to completing a nursing program and passing the licensing examination. There is a higher degree of consistency between both ADN and BSN programs than is found in the item “language spoken at home is not English”.
10. Family responsibilities at home. This item underscores earlier comments that additional work AND family responsibilities decrease time for studying. There is disparity between types of programs for this item.
11. Faculty knowledge of current NCLEX-RN test plan. This item received a 31% response from ALL respondents while ADN respondents and BSN respondents differed by 27%.

The remaining eight questions (items 28 – 35) addressed a variety of topics. Responses to question of *GPA required for science prerequisites* ranged from 2.0 (grade of C) to 3.0 (grade of B) with 69% identifying a GPA between 2.0 and 2.5. For the question that queried about the *Passing grade as a percent required for nursing courses*, responses ranged from 70% to 80%. Eighty-three (83) programs responded to this question. Twenty-five of them (30%) required 70% as a passing grade; 39 programs (47%) reported 75% as their passing grade; and three programs required 76% to 80 % as their passing grade.

When queried whether standardized tests were used for pre-admission assessment and counseling or to measure student progress during enrollment, 25% of the programs stated they use standardized pre-admission/counseling tests and 41% use standardized tests to measure student progress during enrollment in the program. Only 20% of the programs provide on-site NCLEX-RN review courses.

Twenty-nine respondents provided additional comments (18 ADN and 11 BSN). Five of the comments were related to students’ reading levels. Although nursing text books generally require a 14th grade reading level, these directors reported that some students have a reading level at 8th grade

or definitely below 12th grade reading level. Directors identified that this makes it extremely difficult for students to master theoretical content.

One unidentified California BSN program noted that the total College GPA was more predictive of success than using only the GPA from prerequisite science courses (anatomy, physiology, and microbiology). Verbal and writing skills, group problem solving, and an admission interview were additional factors used by this particular program. One unidentified ADN program noted that their high pass rate was due to stable, experienced faculty who spend a lot of time communicating and working with students; a Learning Resource Center staffed with RN faculty to assist students needing extra help; selective admissions process; and strong support from clinical agencies.

Synthesis of Formal and Informal Studies

Most of the published studies reviewed focused on the impact of grades in selected courses and the results from assessment tests to predict success on the NCLEX-RN. The California nursing program survey, student interviews, and one published study identified significant student characteristics. Students for whom English is a second language, who work 20 hours a week or more, and who have family responsibilities at home face greater challenges in successfully completing the nursing program and passing the national licensing examination. Arathuzik and Aber (1998) had similar findings in their study of a convenience sample of 79 nursing students. Their study reported significant, although low, correlations noted between success in the NCLEX-RN and the following factors: cumulative undergraduate nursing program GPA; English as the primary language spoken in the home; a sense of test taking competency; lack of family responsibilities and demands; and lack of emotions such as anxiety, anger, guilt, and loneliness.

Academic policies that permit students to withdraw from prerequisite science courses when they are failing so they can retake them multiple times was a factor noted by almost 50% of the program directors, regardless of program type. Whether this difficulty for some students is linked to the adequacy of high school courses in math and sciences would require an additional study. Limited knowledge by nursing faculty about the current NCLEX-RN test plan was also a factor. The test plan reflects current practice for newly licensed RNs and can provide useful information for curriculum development. Frequently, faculty respond negatively to using information from the test plan as an adjunct to curriculum development as they “don’t want to teach to the test plan” or state that their “academic freedom” will be violated.

The findings of the survey conducted by the BRN, studies from the literature review, and unpublished studies and activities of some California nursing programs indicate the importance of early identification of students at actual or potential risk so appropriate interventions can occur. These include tutoring, improving study skills, strengthening reading skills, and using study groups. Consistent faculty involvement is also essential to help these students complete the nursing program and become safe, competent registered nurses. Changes in characteristics of the student population require these early interventions. They also require changes in teaching strategies so students can learn at their own pace, experience a variety of learning/teaching methods, and receive prompt faculty feedback. This enables students to focus their limited study time on areas of greatest need.

Success in passing the licensing examination is a multi-dimensional problem. The unique needs of many students with their competing demands for time and money are significant factors. Inadequate high school and college preparation for key math and science courses make it difficult for students

who are now required to synthesize data, think critically and set priorities during the nursing major. Remedial work and tutorial assistance are generally required of students for whom English is a second language since verbal and written communications are essential for all registered nurses. The decrease in or elimination of selection criteria and the use of the lottery has contributed to the increased attrition rate in some ADN programs of 40% or higher. Nursing program directors report that students feel their failure keenly. In some instances, other students could not be located quickly to fill these suddenly vacated slots in nursing courses. Thus applicants who may have been better prepared to complete the program were denied even initial admission to these limited nursing slots.

Bold solutions are needed to increase the number of students completing California nursing programs and passing the NCLEX-RN. The need for more RNs across the state continues to increase.

RECOMMENDATIONS

Task Force members have many recommendations. They are categorized by the group addressed.

Nursing Students and NCLEX-RN Candidates

- Take the licensing examination within three months after graduation
- Participate in assessment tests used during the nursing program to identify areas that need review and improvement
- Use NCLEX-RN review materials and take at least one preparedness examination.
- Become familiar with tests given on computers
- Plan for study time prior to taking the licensing examination
- Use opportunities for study groups and tutoring
- Strengthen English language proficiency if English is a second language

Nursing Faculty – Theory and Clinical

- Become familiar with the current NCLEX-RN Test Plan and use it to develop course objectives and test questions
- Use recognized assessment tests that are specific to your content area to evaluate student preparedness, course content, and course delivery.
- Use test questions that apply content to patient care situations and emphasize critical thinking and priority setting.
- Review feedback critically from the NCLEX-RN examinations to evaluate course content and delivery

Nursing Program Administration and College/University Administration

- Include discussions about the NCLEX-RN test plan with all faculty as part of faculty development, including information about the validity and job-relatedness of the Test Plan to encourage its use as a reference
- Sponsor item-writing workshops as part of faculty development
- Incorporate an assessment of language proficiency, reading level, and reading comprehension as part of prenursing assessment for potential nursing students or for counseling newly admitted students to the nursing major
- Develop techniques to identify at-risk students early and implement remediation plans
- Require that prerequisite courses for admission to the nursing major be completed within five years prior to admission to the nursing major

- Limit the number of times pre nursing students can retake required prerequisite courses
- Use standardized tests throughout the program that are part of the course grade
- Purchase NCLEX-RN type programs for the college computer lab so students can take these exams as practice throughout the program
- Conduct NCLEX-RN review courses on campus and share these with geographically close campuses whenever possible
- Consider adding a comprehensive content/synthesis course during the last semester/quarter to review content, apply critical thinking skills, provide appropriate test taking opportunities, and integrate assessment tests

Board of Registered Nursing

- Seek mandated funds from the Legislature or a grant to support a research project to develop techniques for identifying high-risk-for-failure nursing students so effective remediation strategies can be offered by the college or university
- Develop an on going database of variables relative to candidate performance on the NCLEX-RN such as type of educational program, GPA, and selected demographic characteristics
- Continue to monitor nursing programs having a low NCLEX-RN pass rates and provide feedback and consultation as appropriate
- Research the reading comprehension level of California prelicensure students and its impact on passing the NCLEX-RN on the first attempt.

APPENDIX A

National Council Licensing Examination- Registered Nurses (NCLEX-RN)

The National Council Licensing Examination for Registered Nurses (NCLEX-RN) is based on a job analysis of activities performed by newly licensed, entry-level registered nurses. Data for this job analysis is gathered every three years through a survey completed by a random sample of over 3,000 newly licensed registered nurses. The nation-wide selection of participating RNs is stratified to include the state in which nursing education was obtained and the type of initial education, i.e. diploma, associate degree, or baccalaureate degree. The survey is conducted by the National Council of State Boards of Nursing (NCSBN) and provides the basis for the NCLEX-RN Test Plan.

The NCSBN Examination Committee provides oversight responsibility for NCLEX development and implementation. This Committee is composed of at least six representatives employed by or serving on state boards of nursing. The Committee recommends the Test Plan to the Delegate Assembly for adoption. The Delegate Assembly (the policy making body of NCSBN) is composed of two voting representatives from each of the 61 member boards – 50 states, the District of Columbia, and five United States territories – Guam, Virgin Islands, Puerto Rico, American Samoa, and the Northern Mariana Islands. Five states have separate licensing boards for licensed practical/vocational nurses – thus the 61 members. The Test Plan is used as a framework to develop examination questions that measure competencies required for safe and effective entry-level job performance.

The most recent Job Analysis was conducted in 1999. The Test Plan, approved by the Delegate Assembly in August 2000, remains essentially the same as the 1997 Test Plan. The 2000 Test Plan will become effective April 1, 2001. There are no substantive changes in the percentages allocated to each category of Client Needs. These categories, subcategories, and percentages will remain the same, i.e. *Safe Effective Care Environment, Health Promotion and Maintenance, Psychosocial Integrity, and Physiological Integrity*. The 2000 revision contains some word changes in the description of the Test Plan and elements contained within each category. The purpose of these changes is to increase clarity.

Registered nurses prepare and review test/item questions. They are invited to all expense- paid conferences to perform their respective functions. Each conference lasts four to five days. **Item writers** are selected based on their clinical expertise, experience in writing test items and geographic distribution. About 80% are nurse educators. Standard nursing textbooks or specified journals used nationwide corroborate these questions. **Item reviewers** then review these questions. These registered nurses are in clinical current practice and work directly with RNs who have entered nursing practice within the past 12 months. Each question is reviewed for content accuracy, currency, job-relatedness, and appropriateness for entry-level nursing competence.

In addition a **Panel of Experts** performs a sensitivity review of each question to eliminate cultural, gender, or stereotyping questions. New questions are assessed by including them in the NCLEX-RN as “extra questions”. They are not counted in scoring the licensing examination applicants take.

Representatives from the California BRN (Board members and Nursing Education Consultants) review actual and “extra questions” at least annually to assure that they meet the requirements of the Nursing Practice Act and other California government codes and regulations. The BRN reviewers also review the questions for content accuracy and appropriateness for entry level nursing practice. A **Standard Setting Panel of Judges**, composed of representatives of nine member boards, establishes the standard for passing the NCLEX-RN using a criterion-referenced approach.

California applicants are qualified by the BRN to sit for the NCLEX-RN when they have successfully completed the content required for licensure set forth in the law. Each applicant schedules a date for the computer adaptive examination. This examination is individually adapted from an extensive test pool to enable each applicant to demonstrate his or her ability to use the nursing process to provide safe, competent care to clients in a variety of practice situations. When the NCLEX-RN examination is successfully completed, the BRN issues a license to practice registered nursing in California.

The result of the many steps involved in preparing the NCLEX-RN provides a statistically reliable and valid examination for determining initial licensure as a registered nurse.

APPENDIX B

NCLEX-RN TASK FORCE MEMBERS

Member Responsibilities at Time of Appointment to the Task Force

ASSOCIATE DEGREE NURSING PROGRAMS

Sharon Hall, EdD, RN, Associate Dean of Allied Health
Glendale Community College

Cherie Rector, PhD, RN-C, Director of Allied Health and Disabled Students Programs and Services
College of the Sequoias, Visalia

Jo-Ann Rossitto, DNSc, RN, Associate Dean/Director of Nursing Education
San Diego City College

Sandy Takakura, MSN, RN, Nursing Program Director
Merritt College, Oakland

BACCALAUREATE DEGREE NURSING PROGRAMS

John Lantz, PhD, RN, Dean and Professor, School of Nursing
University of San Francisco

Rosemary Mann, PhD, RN, Associate Professor, Undergraduate Coordinator
School of Nursing, San Jose State University

Candace Meares, PhD, RN, Professor and Chair, Department of Nursing
California State University, Bakersfield

Judith Papenhausen, PhD, RN, Professor and Chair, Department of Nursing
California State University, Los Angeles

BOARD OF REGISTERED NURSING

Jean Harlow, MSN, RN, Supervising Nursing Education Consultant,

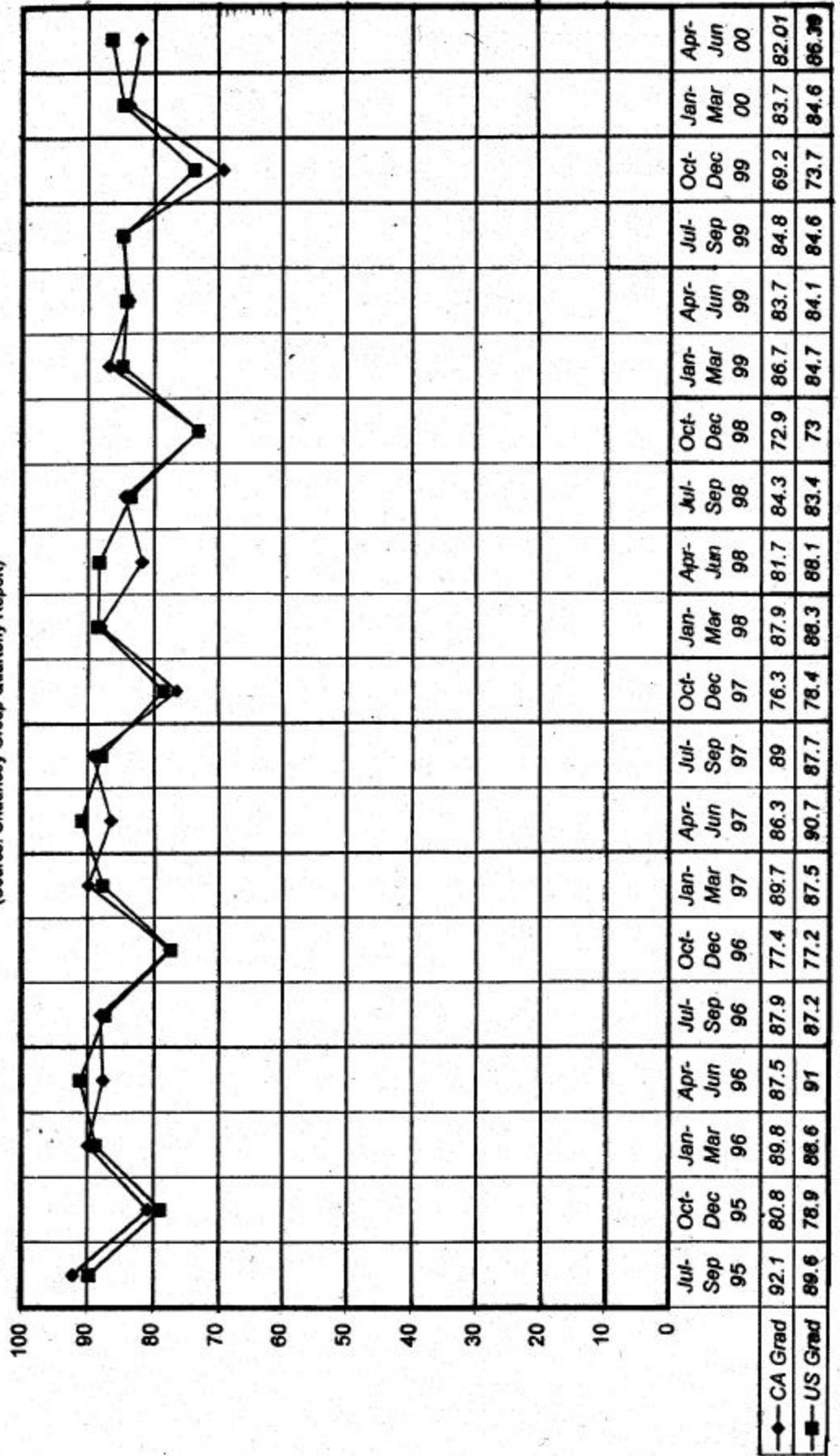
Grace Arndt, MSN, RN, Nursing Education Consultant

Dennis Lawrence, AGPA

Shelley Lockett, MPH, RN, Nursing Education Consultant

APPENDIX C

Appendix
NCLEX EXAM FIRST TIMER PASSING PERCENTAGES
California vs US Graduates
Exams Administered Throughout US
 (Source: Chauncey Group Quarterly Report)



APPENDIX D

SURVEY OF CALIFORNIA PRE-LICENSURE REGISTERED NURSING PROGRAMS

The Board of Registered Nursing has established an NCLEX-RN Task Force to examine the factors that impact the success rate of first time test takers. Please respond by **Wednesday, September 29, 1999** to the enclosed survey by identifying the factors that affect YOUR graduates.

Respond to questions 1 – 27 by filling in the bubble with a **# 2 pencil** on the enclosed scantron form. **Bubble A** is for Strongly Agree (SA); **Bubble B** is for Agree (A); **Bubble C** is for Disagree (D); **Bubble D** is for Strongly Disagree (SD); and **Bubble E** is for No Opinion (NoOP)

Return the completed scantron **AND** this survey with the information completed on the REVERSE SIDE in the self addressed stamped envelop to Jean Harlow, BRN, 400 R Street, Suite 4030, Sacramento, CA 95814.

The following factors impact the graduates of our program as they take the NCLEX-RN examination

FACTORS	SA	A	D	SD	No Op
1. Number of hours worked (20 hrs. /week or more)					
2. Family responsibilities at home					
3. Family culture norms/expectations					
4. Language spoken at home is not English					
5. Adequacy of high school courses in basic math, science, English					
6 Students required to demonstrate English proficiency if they graduated from a high school where English is not primary spoken language					
7. Number of times students repeat college prerequisite science courses (includes withdrawals)					
8. Grade inflation in college prerequisite courses					
9. GPA required for admission to nursing					
10.Students required to pass a basic nursing skills class <u>before</u> admission to nursing program					
11.Students required to be a CNA <u>before</u> admission to nursing program					
12.Use of Required STANDARDIZED student assessment tests during program					
13.Preceptored clinical experience in last semester/quarter					
14.High quality of NCLEX-RN review courses					
15.NCLEX-RN review courses too expensive					
16.Interval of time (3months or more) between student completing program and taking NCLEX-RN					
17.Students' prior experience in taking tests on computers					
18.BSN students casual attitude re taking NCLEX as <u>non-grad</u> of program					
19.ADN/BSN students casual attitude re taking NCLEX as <u>graduate</u> of program					
20.Students' belief that answering more than 75 questions to complete NCLEX indicates failure					
21.Faculty regularly analyze graduates' NCLEX results					
22.Faculty knowledge about NCLEX test plan					
23.Faculty revise curriculum based on latest NCLEX test plan					
24.Faculty serve as NCLEX –RN item writers					
25.Frequent faculty turnover					
26.Veteran's preference as points for admission					
27. LVN 30 unit option students pass NCLEX successfully					

STARTING IN **BUBBLE 51**, PLEASE USE THE NUMBER VALUE OF THE BUBBLE TO RESPOND TO THE FOLLOWING QUESTIONS.

28. In **Bubbles 28-30**, mark college GPA required for science prerequisite courses. Also write GPA here _____

29. In **Bubbles 31-32**, mark passing grade as a percent required for nursing courses. Also write percent here _____

30. In **Bubbles 33-35**, mark the number of students you usually had enrolled from 7/1/96 through 6/30/99. Also write here _____. If below 100, use a zero in bubble 33.

31. In **Bubbles 36 –37**, mark the number of first time NCLEX test failures from 7/1/96 through 6/30/99. Also write here _____.

32. Do you provide NCLEX review courses? In **Bubble 38**, please use A for YES and B for NO. If YES, which courses do you provide? _____

33. Do you use standardized test(s) (not instructor developed) for pre admission assessment? In **Bubble 39**, mark A for YES and B for NO. If yes, what tests do you use? _____

34. Do you use standardized test(s) for determining student progress in your program? In **Bubble 40**, mark A for YES and B for NO. If yes, what tests do you use? _____

Name of Nursing Program _____

Person completing survey _____

Telephone Number _____ **email address** _____

ADDITIONAL COMMENTS

FACTORS NOT INCLUDED; STUDIES (FORMAL AND INFORMAL) YOU OR OTHERS HAVE CONDUCTED, ETC.

Thank you for completing this survey and sharing your comments

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